

**UNCLASSIFIED**

<b>ARMY RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)</b>	DATE <b>February 1999</b>
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BUDGET ACTIVITY <b>2 - Applied Research</b>	PE NUMBER AND TITLE <b>0602789A Army Artificial Intelligence Technology</b>	PROJECT <b>A880</b>
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COST ( <i>In Thousands</i> )	FY1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
A880 Army Artificial Intelligence Technology	764	1156	1276	1346	1380	1418	1532	1606	Continuing	Continuing

**A. Mission Description and Budget Item Justification:** The goal of the Intelligent Technology (IT) applied research program is to mature emerging intelligent and advanced information technology for future insertion into Army applications to achieve the strategic advantage needed to perform the Army's world-wide missions. The threefold purpose of the program is to: (1) develop/apply emerging intelligent technology to solve large scale, highly complex management problems; (2) apply emerging intelligent technology to solve Army-wide problems in policy, personnel training and management, and applications development; and (3) transfer technology to the Army through exploratory development efforts. In addition, the program seeks to identify high potential, but embryonic intelligent methodologies and mature them for high payoff applications through targeted technology demonstration projects and the development of working models. This program has established a number of sophisticated IT cells (knowledge engineering groups (KEGs)) focusing on the integration and application of intelligent technologies to problems in functional communities such as command and control, management, force integration, logistics, modeling, intelligence, resource management, test and evaluation, training, and medical. Focus for this science and technology effort is assisted through these functionally oriented cells. In addition, an office of Artificial Intelligence (AI) research, analysis and evaluation has been established at the United States Military Academy to conduct AI applications research and development. Work in this program element is consistent with the Army Science and Technology Master Plan (ASTMP), the Army Modernization Plan, and Force XXI. This program is overseen by the U.S. Army AI Program General Officer Steering Committee (GOSC) and is managed primarily by the US Army Strategic and Advanced Computing Center, Pentagon.

**FY 1998 Accomplishments:**

- 764 - Demonstrated use of intelligent technologies in integrating vastly different data and technologies to solve highly complex problems.
  - Demonstrated effectiveness of AI and information technology to manage information overload.
  - Investigated AI based prognostics technology for logistics and maintenance.
- Total 764

**FY 1999 Planned Program:**

- 1125 - Demonstrate use of knowledge management and emerging intelligent technologies in integrating vastly different data and intellectual capital to solve highly complex problems.
  - Demonstrate effectiveness of hybrid systems within manufacturing and the knowledge management domains.
  - Demonstrate integration of hybrid systems within synthetic environments for command and control AI systems.
  - Demonstrate the integration of hybrid systems for the testing and evaluation of IT systems.
  - Demonstrate the effectiveness of IT based prognostics systems in achieving "just-in-time" supply and maintenance.
  - 31 - Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) Programs
- Total 1156

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**FY 2000 Planned Program:**

- 1276 Demonstrate applications of intelligent technologies with emphasis in the application of knowledge management and practices to the force structure, personnel, logistics, maintenance, modeling and simulation, and medical domains.
- Total 1276

**FY 2001 Planned Program:**

- 1346 Demonstrate applications of intelligent technologies with emphasis in the application of knowledge management and practices to the force structure, personnel, logistics, maintenance, modeling and simulation, and medical domains.
- Total 1346

<b>B. Program Change Summary</b>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>
Previous President's Budget (FY 1999 PB)	1205	1164	1206	1260
Appropriated Value	1255	1164		
Adjustments to Appropriated Value				
a. Congressional General Reductions	-50	-8		
b. SBIR / STTR	-31			
c. Omnibus or Other Above Threshold Reduction	-10			
d. Below Threshold Reprogramming	-400			
e. Rescissions				
Adjustments to Budget Years Since FY 1999 PB			+70	+86
Current Budget Submit (FY 2000/2001 PB)	764	1156	1276	1346

Change Summary Explanation: Funding – FY98: Funds reprogrammed (-400) for other high priority requirements.